

AMENDMENTS TO THE CLAIMS

The following listing of claims will replace all prior versions and listings of claims in the application.

LISTING OF CLAIMS

1. (Currently Amended) A fuel cell stack comprising: a fuel cell having an inlet, a flow field in fluid communication with said inlet and an outlet in fluid communication with said flow field; a vaporized water source in fluid communication with said inlet; a differential pressure transducer repeatedly measuring a differential pressure across said flow field and generating a set of differential pressure signals; and a controller in communication with said differential pressure transducer, said controller having executable logic for determining a differential pressure fluctuation parameter as a representative statistical value from said set of differential pressure signals and control circuitry for controlling said vaporized water source in response to said differential pressure fluctuation parameter.

2. (Cancelled)

3. (Currently Amended) The fuel cell of claim [[2]] 1 wherein said representative statistical value is a root-mean-square value.

4. (Currently Amended) The fuel cell of claim ~~[[2]]~~ 1 wherein said controller further comprises executable logic for comparing said representative statistical value to a threshold variable.

5. (Original) The fuel cell of claim 4 wherein said representative statistical value is a root-mean-square value.

6. (Original) The fuel cell of claim 1 wherein said executable logic further comprises executable logic for determining fluctuation instances in said set of differential pressure signals, a maximum value for each fluctuation instance, a minimum value for each fluctuation instance, and a representative statistical value from said maximum values and said minimum values.

7. (Original) The fuel cell of claim 6 wherein said representative statistical value is a root-mean-square value.

8. (Original) The fuel cell of claim 6 wherein said executable logic further comprises executable logic for comparing said representative statistical value to a threshold variable.

9. (Original) The fuel cell of claim 8 wherein said representative statistical value is a root-mean-square value.